CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.06/MM/SDBC/Bitumen/2014-15 16.04.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP,
AGENCY	**Mr. Ninganagowda .V. Patil,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to roads and drains at M.S Ramaiah North City Surrounding areas roads in Ward No.06 Thanisandra Village Limits, BBMP, Bangalore.
REFERENCE	AEE/BTP/(WO)/522/2014-15 Dated: 07.04.2014
SAMPLE I/D	Roads and drains at M.S Ramaiah North City in Ward No.06
DATE OF TESTING	16.04.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	474.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.50
7. Bitumen content in %	5.20	5.10
8. Average	5.15	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	35.64	7.13	7.13	92.87	90-100
4.75	268.7	53.74	60.87	39.13	35-51
2.36	57.12	11.42	72.29	27.71	24-39
1.18	49.67	9.93	82.23	17.77	15-30
0.3	28.45	5.69	87.92	12.08	9-19
0.075	30.47	6.09	94.01	5.99	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	25.32	5.06	5.06	94.94	90-100
4.75	236.8	47.36	52.42	47.58	35-51
2.36	98.45	19.69	72.11	27.89	24-39
1.18	47.12	9.42	81.54	18.46	15-30
0.3	29.1	5.82	87.36	12.64	9-19
0.075	36.51	7.30	94.66	5.34	3-8

Note:

Þ This test report should not be reproduced except in full, without written approval of the laboratory.

Þ The results indicated above are based on the tests carried out on the samples received in the laboratory.

Þ Any enquiry regarding the report must be reported within 15 days from the date of testing.

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M/s. Civil-Tech Consultants & Engineers

23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
BasaveshwaraNagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.06/NVP/WMM/Gradation/2014-15 — 08.04.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Ninganagowda .V. Patil,** Contractor, Bangalore.

Name of Work : Improvements to roads and drains at M.S Ramaiah North City Surrounding areas roads in Ward No.06 Thanisandra Village Limits, BBMP, Bangalore.

Reference : AEE/BTP/(WO)/522/2014-15 Dated: 07.04.2014

Date of Testing : 08.04.2014

Material : WMM

Sample Location : WMM Mix Plant — Oven Dry Wt (gm): 25700

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	925	925	3.6	96.4	95-100
22.4	5945	6870	26.7	73.3	60-80
11.2	5515	12385	48.2	51.8	40-60
4.75	4895	17280	67.2	32.8	25-40
2.36	3365	20645	80.3	19.7	15-30
0.600	2420	23065	89.7	10.3	8-22
0.075	2350	25415	98.9	1.1	0-8

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M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.